

Work Order ID 131533

Tuesday, April 14, 2015 7:12:26 AM

131533

Page 1

Item ID: D3118-3 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Sign Assembly
Start Date: 5/20/2015 Start Qty: 3.00 ***3*** Cust Item ID:
Required Date: 5/20/2015 Req'd Qty: 3.00 ***3*** Customer:
Reference:

Approvals: Process Plan: CL Date: 15/04/14 Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3118	E								

100

0.00

100

PURCHASING

Purchasing

Memo

0.00

Purchasing

Issue P/O: 28092
Manufacture as per dwg D3118Possible Supplier: SRB TECHNOLOGIES
Supplier P#: 9004043

Material release note required

Sign should be self-luminous to min. brightness of 160 microlamberts

CL APR 14 2015 3

110

Receive & Inspect for Damage & Mat'l Certs

0.00

110

Packaging

Memo

0.00

Packaging

Ensure Material Release Note is attached

3x SP15-05-14

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width: 100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td style="border: none;"></td> </tr> </table>								Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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120

QC6- Inspect dimensions to drawing

0.00

120

QC

Memo

0.00

Quality Control

Check dims to dwg and certification attached

3

9-89

MAY 14 2015

130

Identify as per dwg & Stock Location: _____ 0.00

130

Packaging

Memo

PPP 131559 x 3

0.00

Packaging

3

MAY 14 2015

140

QC21- Final Inspection - Work Order Release 0.00

140

QC

Memo

0.01

Quality Control

MCS

MAY 14 2015

MCS MAY 14 2015

DQA: _____ Date: _____



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D3118-3

Required Qty: 3.00

IPP REV:B

[illegible]

DQA: _____ Date: _____



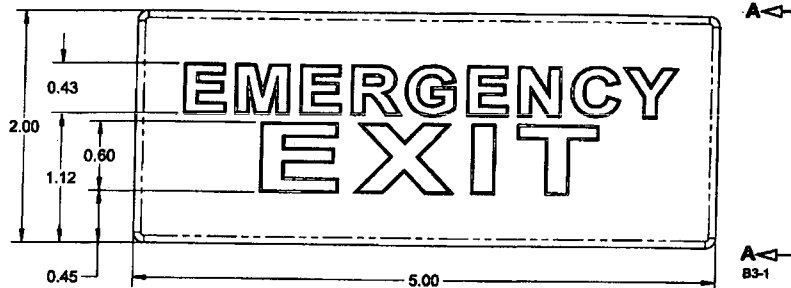
WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

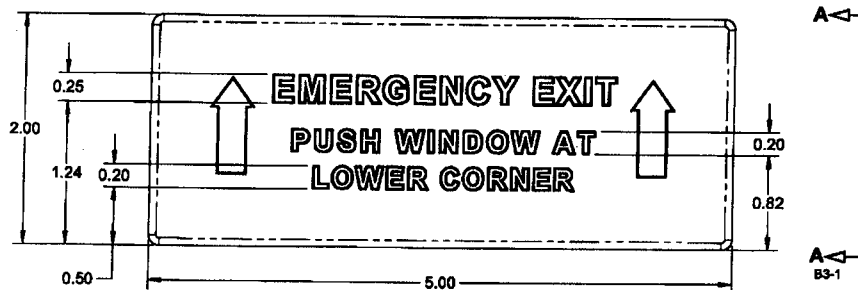
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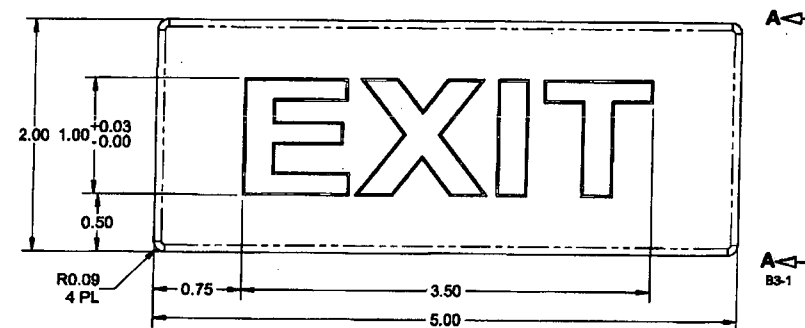
SPECIFICATION CONTROL DRAWING



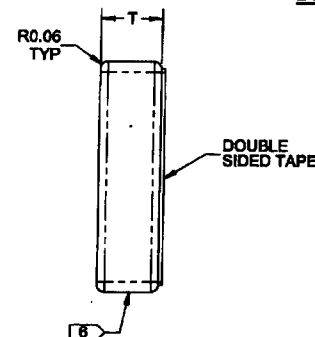
D3118-1 SIGN ASSEMBLY
REPLACES PREMIER P/N 027-57000-01,
BHT P/N 48860-01008-00



D3118-3 SIGN ASSEMBLY
REPLACES PREMIER P/N 027-57000-03,
BHT P/N 212-072-637-107



D3118-5 SIGN ASSEMBLY



VIEW A-A
C8-1
C1-1
B5-1

NOTES:

- 1) MATERIAL: POLYCARBONATE
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: WITH DART P/N "D3118-X" AND B/N "BXXXX" PER DART QSI 044 8.1
- 7) WEIGHT: 0.30 lbs EACH
- 8) POSSIBLE SUPPLIER: SRB TECHNOLOGIES (CANADA), INC
320-140 BOUNDARY ROAD
PEMBROKE, ONTARIO, K8A 6W5
PHONE: 613-732-0055
FAX: 613-732-0058
- 9) SEE TABLE FOR SUPPLIER PROCUREMENT P/N'S
- 10) SIGNS SHOULD BE A RED BACKGROUND, CLEAR LETTERING WITH WHITE BORDER AROUND EACH LETTER
- 11) SIGNS SHOULD BE SELF-LUMINOUS TO MINIMUM BRIGHTNESS OF 160 MICROLAMBERTS

REV.	DESCRIPTION	BY	DATE
E	REVISE SUPPLIER AND SUPPLIER PART NUMBERS	SFM	13.07.16
D	UPDATED TO COMPLY WITH QSI 043; ADDED SUPPLIER P/N PROCUREMENT CHART (ZN A4-1) REF: PAR11-127	MB	11.11.02
C	ADD D3118-5	RF	05.02.22
B	ADD MINIMUM BRIGHTNESS = 160 MICROLAMBERTS	RF	04.05.05
A	NEW ISSUE	RF	02.04.15
DESIGN	DART AEROSPACE LTD		
DRAWN	HAWKESBURY, ONTARIO, CANADA		
CHECKED	DRAWING NO. D3118		
MFG. APPR.	REV. E		
APPROVED	SHEET 1 OF 1		
DE APPR.	TITLE		
DATE	SIGN ASSEMBLY		
	NTS		
	COPYRIGHT © 2012 BY DART AEROSPACE LTD		
	THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED BY THE CORPUS CONNECTION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED IN ANY MANNER WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.		

DART PART NUMBER	SUPPLIER PART NUMBER	THICKNESS
D3118-1	9004030	0.52
D3118-3	9004043	0.52
D3118-5	9004001	0.66

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								Lead hand / Supervisor Approval Verification	
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Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER :							
Misidentified ☐	Past Due ☐								

SRB TECHNOLOGIES (CANADA) INCORPORATED

SRB21379

320 Boundary Road, Suite 140, Pembroke, Ontario, Canada; Phone (613) 732-0055

SHIPMENT PACKING SLIP AND MANIFEST

DATE:	May 13, 2015
WAYBILL #:	Fedex: 5820 8845 2353
DESTINATION:	Dart Aerospace Ltd; Hawkesbury, ON, Canada

[illegible]**TYPE OF SHIPMENT:**

☐ UN2915
 ☒ UN2911
 ☐ UN2910
 ☐ REGULAR
 ☐ OTHER (SPECIFY): _____

NO. OF PACKAGES:		1	PACKED BY:	Shane Pleau - Import/Export Manager		
TOTAL ACTIVITY:		12.75		ATTN: Chantal Lavoie		
DIM (in):	9 X 9 X 11		Ci.	www.betalight.com		
						2



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO28092**

Purchase Order Date 4/13/2015

PO Print Date 4/14/2015

Page Number 1 of 2

Order From :

VC-ROY001

RBC ROYAL BANK - VISA
PAYMENT CENTRE, PO BOX 4016, STAT. A
TORONTO, ON M5W 1X6
CA

Ship To : DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

REVISED \$

Contact Name

Vendor Phone

Ship To Contact

Ship To Phone

Ship Via: FedEx Overnight collect

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax #

10127-2607

Terms

COD

Currency

CAD

FOB

Destination-Collect

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
1	9004043	Sign Assembly	7/3/2015 Yes 7/3/2015		5.00 Each	\$386.12	\$1,930.60
AS PER DWG D3118 REV. E B131395 SRB TECHNOLOGIES P/N: 9004043							
Line Total:							\$1,930.60
3	9004043	Sign Assembly	5/20/2015 Yes 5/20/2015		3.00 Each	\$772.24	\$2,316.72
AS PER DWG D3118 REV. E B131533 SRB TECHNOLOGIES P/N: 9004043, EXPEDITED FEE FOR 3 UNITS							
Line Total:							\$2,316.72

PO Instructions: SRB TECHNOLOGIES
VISA: 4516 0500 0527 9033
EXP: 10/16 CID 351

Note:

4/14/2015



Canadian Nuclear Safety Commission

Radiation Safety Data Sheet

This data sheet presents information on radioisotopes only.

For information on chemical compounds incorporating this radionuclide, see the relevant Material Safety Data Sheet.

Part 1 - RADIOACTIVE MATERIAL IDENTIFICATION

Chemical Symbol:	H	Common Names:	Tritium
Atomic Weight:	3	Atomic Number:	1

Part 2 - RADIATION CHARACTERISTICS

Physical Half-Life: 12.35 years

Unconditional Clearance Levels: Activity Concentration (Bq/g) 1×10^2

CNSC Exemption Quantity: Activity Concentration (Bq/g) 1×10^6
Activity (Bq) 1×10^9

Principal Emissions	Average Energy of Most Abundant Emission (MeV)	Maximum Energy of Most Abundant Emission (MeV)	Gamma-Ray Dose Rate at 1m Distance (mSv/h per GBq)	Shielding Information ¹
Neutrons	-	-	-	-
Gamma & X-ray	-	-	-	-
Beta* & Electron	0.0057	0.0186	-	Total absorption: <0.1 mm glass or <0.1 mm plastic
Alpha	-	-	-	-

* Where beta radiation is present, bremsstrahlung radiation will be produced. Shielding for bremsstrahlung radiation must be considered.

¹Delacroix, D. et al, Radionuclide and Radiation Protection Data Handbook 2002.

Progeny

Part 3 - DETECTION AND MEASUREMENT

Method of Detection:

Wipes counted by a beta probe (e.g., wipes counted by a liquid scintillation counter)

Dosimetry:

External: TLD (whole body & skin) _____ Extremity _____ Neutron _____

Internal: Whole body _____ Thyroid _____ Urine analysis ☒ Other (specify) _____

Part 4 - PREVENTATIVE MEASURES

Tritium is not a radiation hazard unless it enters the body. Once in the body, tritiated water is uniformly distributed in the body water and can then expose tissue. The dose from inhaled elemental tritium gas is 10,000 times less than that from tritiated water. Tritiated water can be absorbed through the surface of skin, leading to an internal exposure. Gaseous tritium is a fire and explosion hazard when exposed to heat or flame and can react vigorously with oxidizing materials.

Recommended protective clothing: Lab coat and PVC gloves (0.5 mm thick) are preferred because of this material's low permeability to tritiated water. Many tritium compounds readily penetrate gloves and skin. Handle these compounds remotely, wear two pairs of gloves and change the outer layer at least every twenty minutes. Plastic aprons provide added protection especially against tritiated water. Plastic suits may be necessary for work at TBq levels or in an atmosphere contaminated with tritiated water.

Handle tritiated water, gases and volatile liquids in ventilated enclosures. Use glass containers to store tritium compounds because tritiated water and tritiated organic solvents will pass through plastic. Use disposable absorbent liners on trays.

Consult CNSC license for requirements concerning engineering controls, protective equipment, and special storage requirements.

Part 5 - ANNUAL LIMIT ON INTAKE

	Ingestion	Inhalation	
Compound Type	Tritiated water	Tritiated water	Elemental tritium gas
Annual Limit on Intake (Bq)	1.0×10^9	1×10^9	1.0×10^{13}

EMERGENCY PROCEDURES

The following is a guide for first responders. The following actions, including remediation, should be carried out by qualified individuals. In cases where life threatening injury has resulted, **first** treat the injury, **second** deal with personal decontamination. In the case of an emergency, the Radiation Safety Officer should be contacted as soon as practicable.

Personal Decontamination Techniques

- Wash well with soap and water and monitor skin
- Do Not abrade skin, only blot dry
- Decontamination of clothing and surfaces are covered under operating and emergency procedures

Spill and Leak Control

- Alert everyone in the area
- Clear area
- Summon Aid

Emergency Protective Equipment, Minimum Requirements

- Gloves
- Footwear Covers
- Safety Glasses
- Outer layer or easily removed protective clothing
- Suitable respirator selected

Canadian Nuclear Safety Commission
P.O. Box 1046, Station B
Ottawa, Canada
K1P 5S9

Tel: (613) 995-5894 Fax: (613) 995-5086
24 Hour Emergency Hotline: (613) 995-0479

Revision number: 1

Date of revision: 19 September 2011

**SRB TECHNOLOGIES (CANADA) INC.**

320-140 Boundary Road
Pembroke, Ontario, Canada, K8A 6W5
Tel.: (613) 732-0055
Fax: (613) 732-0056
E-Mail: sales@betalight.com
Web: www.betalight.com

CERTIFICATE OF CONFORMANCE**ACCOUNT TO:**

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON
Canada K6A 1K7

CERTIFICATE OF CONFORMANCE ID:

CDN003494

YOUR REFERENCE:

PO28092

OUR REFERENCE:

PO28092

DATE:

May 12, 2015

ITEM #	PART NUMBER	DESCRIPTION/ SPECIFICATION	QUANTITY	REMARKS/ DELIVERY POSITION
3	D3118-3 (9004043) SRBT P/N: 9004043	Sign Assembly T 4.25 Ci. (157.25 GBq) S/N's: 25100 - 25102	3	Batch # B28092 (PO28092) Mfg. May/2015

This is to certify that the whole of the material and/or parts described herein have been manufactured to the quality standards registered under ISO 9001:2008 and conform to the full specification of the appropriate drawings and purchase order requirements.

Test methods for Betalights™ and devices containing Betalights™, including leakage and surface contamination, conform to the British Defence Standard 62-4/4 and/or ANSI/HPS N43.4-2000.

Signed for on behalf of SRB Technologies (Canada) Inc.


N. Belleau, Quality Manager